Application No. 09/990,916
Amendment dated February 28, 2008
Response to Final Office Action of Dec. 28, 2007

Atty. Docket No. 42P11857
Examiner DALENCOURT
TC/A.U. 2157

REMARKS

Applicants respectfully request reconsideration of the above referenced patent application in view of the amendments and remarks set forth herein, and respectfully request that the Examiner withdraw all rejections. No claims have been amended. No claims have been canceled. No claims have been added. Thus, claims 30-43 and 45-48 are pending.

35 U.S.C. §103(a) Rejections

35 U.S.C. §103(A) Rejection over *Timm* in view of *Hickman*

The Office Action rejects claims 30, 32-43 and 45-47 under §103(a) as being obvious in light of Timm et al., USPN 6,055,268 (hereinafter "*Timm*") in view of Hickman et al., USPN 6,819,680 (hereinafter "*Hickman*"). To establish *prima facie* obviousness of a claimed invention, all of the claim limitations must be taught or suggested by one or more prior art references. *See* M.P.E.P. § 2143.03. For at least the following reasons, Applicants traverse the above rejection.

Applicants respectfully submit that each of the above rejected claims is not obvious in light of *Timm* and *Hickman*, based at least on the failure of the references to teach or suggest (emphasis added):

> "…automatically **aggregating multiple media access controllers** (MACs), based, at least in part, on the identified communication capability of the remote device, **the aggregated MACs to communicate with the remote device** via a virtual data sub-channel within a physical data channel;…"

as variously recited in current independent claims 30, 39, and 43.

In rejecting the above claims, the Final Office Action relies on *Hickman* as allegedly disclosing an aggregation of multiple MACs. *Hickman* only discusses **link aggregation**, which is specified as aggregating **multiple physical links** into one logical link. See, e.g., *Hickman* col. 1, lines 46-49. No other kind of aggregation is discussed in *Hickman*. The Final Office Action also relies on *Timm* as allegedly disclosing some kind of aggregation of **only a single** media access controller (MAC). More particularly, the Final Office Action (e.g., page 3, lines 6-10 and page 4, lines 3-4) alleges that *Timm*

discloses an aggregating of **only a single** MAC – where this alleged aggregating in *Timm* is purported to have characteristics that can then be combined with an allegedly analogous aggregating of **multiple** MACs in *Hickman*. As discussed hereafter, the Final Office Action **improperly** bases the above rejections on multiple interpretations of the meaning of "aggregating" (or "aggregate", "aggregation") as recited in the claims, as used in *Timm* and as used in *Hickman* – interpretations which are variously unexplained, indefinite, unsupported and/or contradictory.

First, the Final Office Action **fails** to provide any clear explanation of why the relied upon passages of *Timm* disclose any kind of aggregation of **only a single MAC**. Rather, the Final Office Action makes only a passing reference to the **initialization process** in *Timm*, wherein a subscriber-end MDSL modem and a central office-end MDSL modem determine one another's line code capability to develop respective channel models. However, this initialization process in *Timm* is **also** alleged by the Final Office Action to disclose the claimed identifying of a communication capability upon which the claimed aggregating MACs is based. Applicants note that the claimed identification of a communication capability is to be **distinguished from** an automatic aggregating of MACs which is based on said identification of a communication capability. Even assuming *arguendo* that the relied-upon initialization process of *Timm* discloses the claimed "identifying a communication capability of a remote device", which Applicants do not agree, the same initialization process, in and of itself, **cannot also** disclose some kind of aggregating of **only a single** MAC which is be based on, and is to be distinguished from, said initialization process. Applicants fail to see how the initialization process of *Timm* either includes, or is in any way a basis for, anything which could possibly be construed as aggregating **only a single MAC**, as alleged by the Final Office Action.

Second, the Final Office Action **fails** to even explain what aggregation of **only** a single MAC **might possibly mean**, and/or how such an aggregating of **only** a single MAC could even be accomplished. Applicants surmise that the Final Office Action interprets *Timm* as disclosing either (1) that **only** a MAC associated with the subscriber-

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end MDSL modem is aggregated, and **not** a MAC associated with the central office-end MDSL modem, or (2) that **only** a MAC associated with the central office-end MDSL modem is aggregated, and **not** a MAC associated with the subscriber-end MDSL modem. However, the Final Office Action fails to explain, for example, (1) **which** particular MDSL modem is the modem whose associated MAC is the **only** MAC being aggregated, (2) **with what** is this single MAC being aggregated, if not another MAC, and/or (3) in what sense can this single MAC be said to be aggregated, if it is not aggregated with some other thing – e.g. another MAC. As previously argued in Applicants communication filed October 03, 2007, any alleged aggregating of the two MACs associated with the MDSL modems in *Timm* **could not** be "aggregated MACs to communicate with the remote device" – as recited in the claims – at least insofar as one of these MACs is part of (i.e. local to) the supposed remote device itself. Absent any alternative explanation as to the precise nature of the alleged aggregating of only a single MAC in *Timm*, Applicants respectfully submit that it is simply **nonsensical** to allege that *Timm* discloses any kind of aggregation wherein it is **only a single MAC** which is aggregated.

Third, even assuming *arguendo* that *Timm* in some way disclosed some kind of aggregating wherein **only a single MAC** is to be aggregated, which Applicants do not agree, the Final Office Action nevertheless **fails** to provide any **particular support** for the proposition that *Timm* thereby discloses MAC aggregating which is analogous to, and may therefore be combined with, the link aggregating of *Hickman*. The Final Office Action only makes a general assertion that the alleged aggregation of **only a single** MAC in *Timm* is "analogous" to link aggregation in *Hickman*. However, any aggregating of **only** a single MAC by *Timm* is **not shown to be analogous** to link aggregation in *Hickman*, based at least on the **failure** of the Final Office Action to provide any explanation as to what aggregating of **only a single MAC** even means. Moreover, not only does the Final Office Action **fail** to show that the alleged aggregating of *Timm* is **analogous** to link aggregation in *Hickman*, it **affirmatively shows** that the alleged aggregating in *Timm* would be **non-analogous** to link aggregation in *Hickman*, as discussed hereafter.

By its very nature, the link aggregation specified in *Hickman* **necessarily** requires **multiple physical links** – i.e. the multiple physical links which are to be aggregated into a single logical link. Accordingly, any link aggregation according to *Hickman* **cannot** be reducible in any way to some kind of aggregating of **only a single physical link**. By way of illustration, if there is only one physical link, any type of aggregation akin to that of *Hickman* simply cannot take place. Similarly, assuming *arguendo* that aggregation of multiple physical links in *Hickman* in some way anticipated the claimed aggregating of multiple MACs, which Applicants do not agree, any such aggregation of multiple MACs, by its very nature, **could not** be reducible to any kind of aggregating of **only a single MAC**. In characterizing *Timm* as aggregating **only a single** MAC, the Final Office Action can only be referring to operations in *Timm* which have **no analogy** to the link aggregation of *Hickman*. Accordingly, the Final Office Action **itself** explains why any alleged aggregation in *Timm* is **entirely unrelated** (and non-analogous) to, and **cannot be combined with**, the link aggregation of *Hickman*.

For at least the foregoing reasons, the rejection of the above claims improperly relies on an alleged aggregation of only a single MAC which lacks any apparent meaning, which is not explained by the Final Office Action, which is not supported in *Timm* and which by its nature could only be a type of aggregating which could not be combined with the link aggregation in *Hickman*. The Final Office Action does not offer *Hickman* as teaching or suggesting automatic MAC aggregation which is based at least in part on an identified communication capability of a remote device, and Applicants respectfully submit that *Hickman* fails to disclose those claim limitations which are not taught or suggested by *Timm* alone. Applicants note, for example, that *Hickman* fails to disclose that any link aggregating includes **automatic** aggregating of multiple MACs **based on** an identified communication capability of a remote device. Furthermore, *Hickman* fails to disclose that any **aggregated MACs** communicate with a remote device via a virtual data sub-channel **within a physical data channel**.

Accordingly, each of independent claims 30, 39, and 43 is non-obvious in light of *Timm* and *Hickman*. If an independent claim is non-obvious under 35 U.S.C. §103, then

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any claims depending therefrom – e.g. claims 32-38, 40-42 and 45-47 – are also non-obvious. *See* M.P.E.P. §2143.03. For at least the foregoing reasons, Applicants request that the above 35 U.S.C. §103(a) rejection of claims 30, 32-43 and 45-47 based on *Timm* and *Hickman* be withdrawn.

35 U.S.C. §103(a) Rejections

35 U.S.C. §103(A) Rejection over *Timm, Hickman, 802.3ae* and *XAUI/XGXS*

The Office Action rejects claims 38, 42 and 45 under §103(a) as being obvious in light of *Timm* in view of *Hickman* in further view of "802.3ae 5 Criteria" (hereinafter "*802.3ae*") and in further view of "XAUI/XGXS Proposal" (hereinafter "*XAUI*") . In rejecting the above claims, the Final Office Action relies at least in part on the previously-discussed 35 U.S.C. § 103 rejection of independent claims 30, 39 and 43. For at least the following reasons, Applicants traverse the above rejection.

As discussed above, there is a least one limitation in each of independent claims 30, 39 and 43 which is not taught or suggested by any combination of *Timm* and *Hickman* – e.g. automatically aggregating multiple MACs based, at least in part, on an identified communication capability of a remote device, the aggregated MACs to communicate with the remote device via a virtual data sub-channel within a physical data channel. In rejecting the above claims, the Final Office Action does not offer any combination of *802.3ae* and *XAIU* as teaching or suggesting those limitations which are not taught or suggested by *Timm* and *Hickman* alone. Applicants submit that no combination of *Timm*, *Hickman*, *802.3ae* and *XAUI* teaches or suggests automatically aggregating multiple MACs based, at least in part, on an identified communication capability of a remote device, the aggregated MACs to communicate with the remote device via a virtual data sub-channel within a physical data channel. Therefore, the cited references fail to either teach or suggest at least one limitation of the invention as variously recited in each of independent claims 30, 39, and 43.

Accordingly, each of independent claims 30, 39, and 43 is non-obvious in light of *Timm*, *Hickman*, *802.3ae* and *XAUI*. If an independent claim is non-obvious under 35 U.S.C. §103, then any claims depending therefrom – e.g. claims 38, 42 and 45 – are also

non-obvious. *See* M.P.E.P. §2143.03. For at least the foregoing reasons, Applicants request that the above 35 U.S.C. §103(a) rejection of claims 38, 42 and 45 based on *Timm*, *Hickman*, *802.3ae* and *XAUI* be withdrawn.

35 U.S.C. §103(a) Rejections

35 U.S.C. §103(A) Rejection over *Timm*, *Hickman* and *Lay*

The Office Action rejects claims 31 and 48 under §103(a) as being obvious in light of Timm et al., USPN 6,055,268 (hereinafter "*Timm*") in view of Hickman et al., USPN 6,819,680 (hereinafter "*Hickman*") and in further view of Lay et al., USPN 6,862,293 (hereinafter "*Lay*"). In rejecting the above claims, the Final Office Action relies at least in part on the previously-discussed 35 U.S.C. § 103 rejection of independent claims 30 and 43. *Lay* is alleged to further disclose that a communication link is an IEEE 802.3ae compliant communication link, with a data channel of 10 gigabit per second (Gb/s). For at least the following reasons, Applicants traverse the above rejection.

As discussed above, there is a least one limitation in each of independent claims 30 and 43 which is not taught or suggested by any combination of *Timm* and *Hickman* – e.g. automatically aggregating multiple MACs based, at least in part, on an identified communication capability of a remote device, the aggregated MACs to communicate with the remote device via a virtual data sub-channel within a physical data channel. In rejecting the above claims, the Final Office Action does not offer *Lay* as teaching or suggesting those limitations which are not taught or suggested by *Timm* and *Hickman* alone. Applicants submit that no combination of *Timm*, *Hickman*, and *Lay* teaches or suggests automatically aggregating multiple MACs based, at least in part, on an identified communication capability of a remote device, the aggregated MACs to communicate with the remote device via a virtual data sub-channel within a physical data channel. Therefore, the cited references fail to either teach or suggest at least one limitation of the invention as variously recited in each of independent claims 30, 39, and 43.

Accordingly, each of independent claims 30, 39, and 43 is non-obvious in light of *Timm*, *Hickman*, and *Lay*. If an independent claim is non-obvious under 35 U.S.C. §103,

then any claims depending therefrom – e.g. claims 31 and 48 – are also non-obvious. *See* M.P.E.P. §2143.03. For at least the foregoing reasons, Applicants request that the above 35 U.S.C. §103(a) rejection of claims 31 and 48 based on *Timm*, *Hickman*, and *Lay* be withdrawn.

Finality of the Rejection

Both M.P.E.P. §706 and 37 C.F.R. § 1.104(c)(2) state that (emphasis added):

> "…when a reference is complex or shows or **describes inventions other than that claimed** by the applicant, the particular part relied on must be **designated as nearly as practicable**. The **pertinence of each reference, if not apparent, must be clearly explained** and each rejected claim specified."

As discussed above, each of the rejections in the Final Office Action relies on an interpretation of *Timm* as allegedly disclosing some kind of aggregation of **only a single** media access controller (MAC). More particularly, the Final Office Action (e.g., page 3, lines 6-10 and page 4, lines 3-4) alleges that *Timm* discloses an aggregating of only a single MAC – where this alleged aggregating in *Timm* is purported to have characteristics that can then be combined with an allegedly analogous aggregating of multiple MACs in *Hickman*. However, as variously argued above:

(1) it is in no way apparent that *Timm* discloses any kind of "aggregation" wherein **only a single MAC** is aggregated,

(2) the Final Office Action fails to provide a **clear explanation**, as required by M.P.E.P. §706 and 37 C.F.R. § 1.104(c)(2), as to how the relied-upon passages of *Timm* discloses any such aggregation of **only a single MAC**

(3) the Final Office Action fails to explain what aggregating **only** a single MAC **might possibly mean**, and/or how such an aggregating of only a single MAC could even be accomplished,

(4) absent any clear explanation of what the Final Office Action considers as constituting an aggregation of only a single MAC, it **cannot** be shown that any such aggregation in *Timm* could be analogous to – or could otherwise be combined with – the link aggregation of *Hickman*, and

(5) in characterizing *Timm* as aggregating **only a single** MAC, the Final Office Action itself demonstrates that the aggregation of multiple physical links in *Hickman* would be entirely **non-analogous** to, and could not be combined with, any operation in *Timm* which the Final Office Action might label as "aggregating".

For at least the foregoing reasons, the **finality** of the Final Office Action denies Applicants an opportunity to understand, consider and respond to a proper basis for claim rejection. For at least the foregoing reasons, Applicants respectfully submit that the finality of the claim rejections is **improper**, and Applicants respectfully request that the **finality of the Final Office Action be withdrawn**.

CONCLUSION

For at least the foregoing reasons, Applicants submit that the objections and rejections have been overcome. Therefore, claims 30-43 and 45-48 are in condition for allowance and such action is earnestly solicited. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the present application. Please charge any shortages and credit any overcharges to our Deposit Account number 02-2666.

Respectfully submitted,
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN, LLP

Date: February 28, 2008   /Dermot G. Miller/
                                 Dermot G. Miller
                                 Attorney for Applicants
                                 Reg. No. 58,309

                                 1279 Oakmead Parkway
                                 Sunnyvale, CA 94085-4040
                                 (503) 439-8778